

REMARKS

Applicant amended independent claims 29 and 39 to further define Applicant's claimed invention. Support for the amendment to independent claims 29 and 39 can be found in the specification at least on page 2, lines 7-10 and 16-19, and FIGS. 1 and 6C, 15A and 15B. No new matter has been added.

In the Office Action, the Examiner rejected claims 29-59 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,033,438 to Bianchi et al. ("Bianchi"). Applicant amended independent claims 29 and 39 to recite a method of inserting an implant including providing an implant having a "maximum width" and "a longitudinal axis parallel to the mid-longitudinal axis and passing through said leading and trailing ends, the longitudinal axis being perpendicular to and bisecting the maximum width into two equal parts," the implant having a length between the leading and trailing ends adapted to allow at least a portion of the implant proximate the leading end and at least a portion of the implant proximate the trailing end to "each overlie a peripheral rim of the densely compacted bone of the apophyseal rim along the anatomical curvature of the adjacent vertebral bodies when said implant is implanted in the disc space."

Applicant further amended independent claim 29 to recite "positioning the leading end of the implant so that at least a portion of the implant proximate the leading end between the medial side and the longitudinal axis overlies the apophyseal rim without substantially protruding from the spine" and "positioning the trailing end of the implant so that at least a portion of the implant proximate the trailing end between the medial side and the longitudinal axis overlies the apophyseal rim when the at least a portion of the implant proximate the leading end overlies the apophyseal rim without substantially protruding from the spine."

Applicant further amended independent claim 39 to recite "positioning the leading end of each implant so that at least a portion of the implant proximate the leading end between the medial side and the longitudinal axis overlies the apophyseal rim without substantially protruding from the spine" and "positioning the trailing end of each implant so that at least a portion of the implant proximate the trailing end between

the medial side and the longitudinal axis overlies the apophyseal rim when the at least a portion of the implant proximate the leading end overlies the peripheral rim without substantially protruding from the spine.” Neither one of Figures 8 and 9 of Bianchi cited by the Examiner shows such methods.

In the Office Action, the Examiner contended that in Bianchi, “a mid-longitudinal axis passes through a centroid of the longitudinal wall which borders the lateral side of chamber 530 or 530’.” (Office Action, page 2, lines 25-26 (emphasis in original).) As set forth above, Applicant amended independent claims 29 and 39 to recite a specific location of the longitudinal axis of the implant. An example of the location of the longitudinal axis as now recited in Applicant’s claims is shown in Applicant’s FIGS. 15A and 15B.

Further, the Examiner contended that Applicant “does not assign any ‘special meaning’ . . . to the term ‘peripheral rim of the densely compacted bone’ . . . and Bianchi et al. illustrates in Figure 8 a peripheral rim S of densely compacted bone.” (Office Action, page 3, lines 1-3.) Applicant amended independent claims 29 and 39 to recite “an apophyseal rim,” which is a term defined in the specification (see, e.g., Specification, page 2, lines 7-10 and 16-19) and illustrated and identified in FIG. 1. Moreover, Bianchi teaches that “FIG. 7 shows the variation in bone strength within the vertebral body V, with weaker bone W, disposed toward the center of the body B, and stronger bone S being disposed around the periphery, closest to the ring apophysis A.” (Bianchi, col. 6, lines 29-33 (emphasis added).) Applicant submits that the apophyseal rim as recited in Applicant’s independent claims 29 and 39 and identified as AR in Applicant’s FIG. 1 corresponds to “ring apophysis A” and not to “stronger bone S” in FIGS. 7-9 of Bianchi. Fig. 9 of Bianchi is reproduced and annotated below with the longitudinal axis and the apophyseal rim as claimed by Applicant identified for the Examiner’s reference.

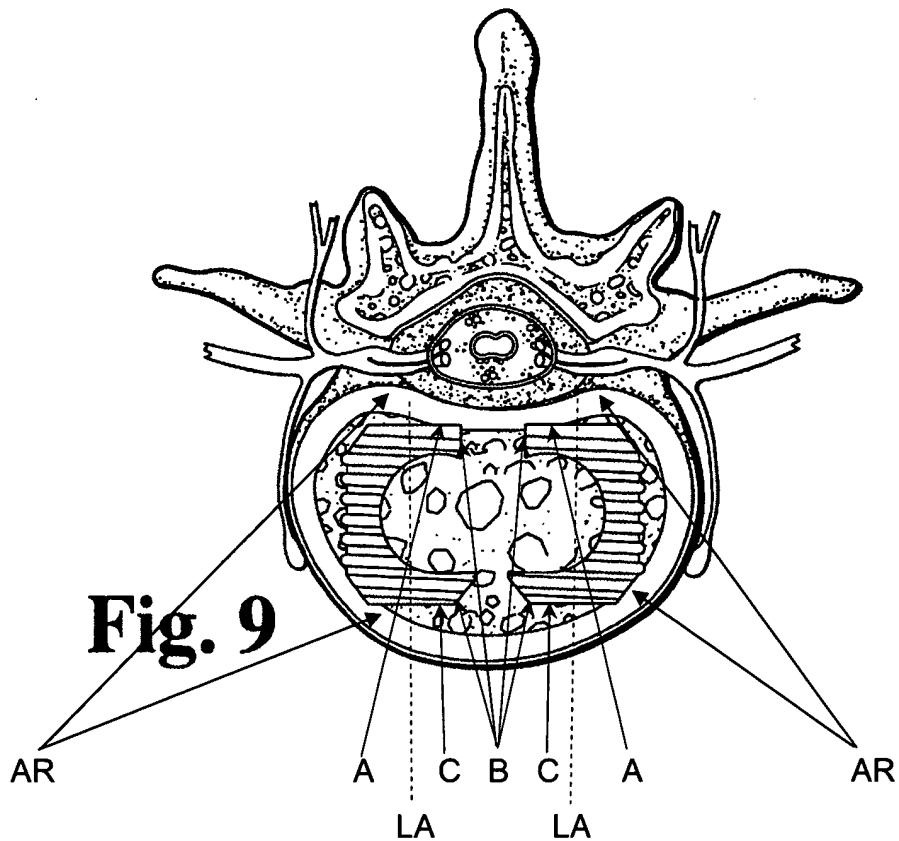


Fig. 9 of Bianchi shows: (1) that the implants are not positioned so that at least a portion (C) of the implant proximate the leading end between the medial side (B) and the longitudinal axis (LA) overlies the apophyseal rim (AR); and (2) that the implants are not positioned so that at least a portion (A) of the implant proximate the trailing end between the medial side and the longitudinal axis of the implant overlies the apophyseal rim when the portion (C) of the implant proximate the leading end overlies the apophyseal rim without substantially protruding from the spine. Moreover, Fig. 9 of Bianchi shows that the lengths of each implant at the medial sides thereof do not allow a portion of the trailing end and a portion of the leading end both being between the medial sides and the longitudinal axes to each overlie the peripheral rim when the implants are implanted in the disc space. Thus, the figures of Bianchi relied on by the Examiner do not disclose a method as recited in Applicant's independent claims 29 and 39.

Applicant submits that the Examiner's 35 U.S.C. § 102(e) rejection of independent claims 29 and 39 and claims 30-38 and 40-59 dependent from one of independent

claims 29 and 39, or claims dependent therefrom, has been overcome.

Applicant submits that independent claims 29 and 39 are patentable and that dependent claims 30-38 and 40-59 dependent from independent claim 29 or 39, or claims dependent therefrom, are patentable at least due to their dependency from an allowable independent claim.

Applicant respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 29-59 in condition for allowance. Applicant submits that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicant submits that the claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicant therefore requests the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this reply, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 50-3726.

Respectfully submitted,

MARTIN & FERRARO, LLP

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By:


Amedeo F. Ferraro
Registration No. 37,129

1557 Lake O'Pines Street, NE
Hartville, Ohio 44632
Telephone: (310) 286-9800
Facsimile: (310) 286-2795